

**Translation****PCT****INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference M719-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/004126	International filing date (<i>day/month/year</i>) 31 March 2003 (31.03.2003)	Priority date (<i>day/month/year</i>) 29 March 2002 (29.03.2002)
International Patent Classification (IPC) or national classification and IPC H01L 21/318, 29/78		
Applicant TOKYO ELECTRON LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input checked="" type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 06 August 2003 (06.08.2003)	Date of completion of this report 07 May 2004 (07.05.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/004126

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig. _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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International application No.

PCT/JP03/04126

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	4, 11	YES
	Claims	1-3, 5-10	NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

Document 1: JP, 10-173187, A (Texas Instruments Incorporated), June 26, 1998 (06.26.98)

Document 2: WO, 00/65631, A2 (Applied Materials, Inc.), November 2, 2000 (11.02.00)

Claims 1-3 and 5-10

The inventions described in claims 1-3 and 5-10 do not appear to be novel based on documents 1 and 2 cited in the international search report. "Nitrogen atoms are contained in high proportion in the vicinity of the surface of the oxynitride film," described in claim 1, is disclosed in document 1, Fig. 5, and document 2, Figs. 11 and 13.

Claim 4

The invention described in claim 4 does not appear to involve an inventive step based on documents 1-2 cited in the international search report. Documents 1-2 do not describe the point that "the maximum nitrogen content is at least 20% and no greater than 30%." However, in view of paragraph [0013] in document 1 stating, "indeed, in section 20, it is preferable that more nitrogen be present than oxygen (probably very little or no oxygen)," it can be said that document 1 suggests the point that "the maximum nitrogen content is at least 20% and no greater than 30%." Therefore, adopting this constitution could be easily conceived of by a person skilled in the art.

Claim 11

The invention described in claim 11 does not appear to involve an inventive step based on documents 1-2 cited in the international search report. Documents 1-2 do not describe the point that "said plasma is plasma based on a flat antenna member (RLSA)." However, in view of document 1, paragraph [0012] describing "plasma is preferably a high-density plasma," it can be said that document 1 suggests the point that "said plasma is plasma based on a flat antenna member (RLSA)." Therefore, adopting this constitution could be easily conceived of by a person skilled in the art.

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VI. Certain documents cited

1. Certain published documents (Rule 70.10)

<u>Application No. Patent No.</u>	<u>Publication date (day/month/year)</u>	<u>Filing date (day/month/year)</u>	<u>Priority date (valid claim) (day/month/year)</u>
WO 02/054474 A1 [E, X]	11.07.2002	27.12.2001	28.12.2000
JP 2002-222941 A [E, X]	09.08.2002	24.01.2001	
JP 2003-163213 A [E, X]	06.06. 2003	29.11.2001	
JP 2003-282567 A [E, X]	03.10.2003	26.03.2002	

2. Non-written disclosures (Rule 70.9)

<u>Kind of non-written disclosure</u>	<u>Date of non-written disclosure (day/month/year)</u>	<u>Date of written disclosure referring to non-written disclosure (day/month/year)</u>
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